

NOV 02 2006

Atty. Dkt. No. SALK2370-2
(088802-5455)Amendments to the Claims/Listing of Claims

Please amend claims 17, 40 and 43-45 as follows. This listing of claims will replace all prior versions, and listings, of claims in the application.

1. – 16. (Cancelled)

17. (Currently amended) A crystalline form of the chalcone synthase ~~having of~~ SEQ ID NO:1, wherein said crystalline form has space group $P 3_2 2 1$, unit cell dimensions 97.54 Å, 97.54 Å, 65.52 Å, and unit cell angles alpha= 90°, beta= 90°, gamma= 120°,

wherein residue Xaa₁₆₄ of SEQ ID NO:1 is selected from the group consisting of Cys and Ser.

18. – 22. (Cancelled)

23. (Previously presented) A crystalline complex comprising said crystalline form of chalcone synthase according to Claim 17 and a chalcone synthase substrate.

24. – 25. (Cancelled)

26. (Previously presented) The crystalline complex of claim 23, wherein said substrate is selected from the group consisting of chalcone, naringenin, resveratrol, cerulenin, acyl-CoA, malonyl-CoA, and hexanoyl-CoA.

27. - 39. (Cancelled)

40. (Currently amended) A method for crystallizing the chalcone synthase ~~having of~~ SEQ ID NO:1 or mutant thereof,

wherein said mutant ~~is selected from the group consisting of said~~ chalcone synthase ~~having~~ has one or more mutations selected from the group consisting of ~~C₄₆₄S, C₄₆₄D~~ Xaa₁₆₄S, Xaa₁₆₄D, H₃₀₃A, H₃₀₃Q, H₃₀₃D, H₃₀₃T, N₃₃₆A, N₃₃₆D, N₃₃₆Q, N₃₃₆H, F₂₁₅S, F₂₁₅Y, and F₂₁₅W,

Atty. Dkt. No. SALK2370-2
(088802-5455)

wherein said method comprises growing crystals of said chalcone synthase or mutant thereof by vapor diffusion at 4 °C in 2 µL drops,

wherein said drops contain a 1:1 mixture of 25 mg/mL of said chalcone synthase and crystallization buffer, and

wherein said crystallization buffer comprises 2.2-2.4 M ammonium sulfate and 0.1 M PIPES, pH 6.5.

41. (Previously presented) The method of Claim 40 further comprising 5 mM DTT.

42. (Previously presented) A crystal produced by the method of Claim 40.

43. (Currently amended) The crystal of Claim 42 where said chalcone synthase ~~has~~ is defined by SEQ ID NO:1.

44. (Currently amended) The crystal of Claim 42 wherein said mutation is ~~C₁₆₄S~~
Xaa₁₆₄S.

45. (Currently amended) The crystal of Claim 42 wherein said mutation is ~~C₁₆₄D~~
Xaa₁₆₄D.

46. (Previously presented) The crystal of Claim 42 wherein said mutation is H₃₀₃A.

47. (Previously presented) The crystal of Claim 42 wherein said mutation is H₃₀₃Q.

48. (Previously presented) The crystal of Claim 42 wherein said mutation is H₃₀₃D.

49. (Previously presented) The crystal of Claim 42 wherein said mutation is H₃₀₃T.

50. (Previously presented) The crystal of Claim 42 wherein said mutation is N₃₃₆A.

51. (Previously presented) The crystal of Claim 42 wherein said mutation is N₃₃₆D.

52. (Previously presented) The crystal of Claim 42 wherein said mutation is N₃₃₆Q.

Atty. Dkt. No. SALK2370-2
(088802-5455)

- 53. (Previously presented) The crystal of Claim 42 wherein said mutation is N₃₃₆H.
- 54. (Previously presented) The crystal of Claim 42 wherein said mutation is F₂₁₅S.
- 55. (Previously presented) The crystal of Claim 42 wherein said mutation is F₂₁₅Y.
- 56. (Previously presented) The crystal of Claim 42 wherein said mutation is F₂₁₅W.